



## **2009 Report to the Legislature**



### **Investor-Owned Utilities'**

## **Green Power Programs in Washington**

**December 1, 2009**

Washington Utilities and Transportation Commission  
Regulatory Services – Energy Section  
1300 South Evergreen Park Drive SW  
P.O. Box 47250  
Olympia, WA 98504-7250  
[www.utc.wa.gov/](http://www.utc.wa.gov/)

This document is available for download at: <http://www.utc.wa.gov/energygreenpowerreport> at the renewable energy/conservation green power link. For questions regarding the information provided in this report please contact:

Deborah Reynolds, Washington Utilities and Transportation Commission, at (360) 664-1255 or [dreynold@utc.wa.gov](mailto:dreynold@utc.wa.gov)

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## EXECUTIVE SUMMARY

Washington State RCW 19.29A.090 directs larger electric utilities to offer their customers a “green power” electricity product – electricity that comes from environmentally benign sources such as wind, solar, landfill gas and other sources identified in statute – which customers may purchase voluntarily. The law requires investor-owned utilities to report annually on the progress of these voluntary green power programs to the Washington Utilities and Transportation Commission UTC).

The following are key findings for investor-owned utilities:

- All three investor-owned utilities offered voluntary green power options to their customers in 2009.
- In 2008, investor-owned utilities sold 355 million kilowatt-hours (kWh), or 40.5 average megawatts (aMW), of green power through voluntary programs.
- Investor-owned utilities included an additional 451 million kWh, or 51.5 aMW, of non-voluntary green power through standard rate base power during 2008, bringing the total green power investment in Washington to 806 million kWh, or 92 aMW.
- Two of the three investor-owned utilities show a decline in 2009 sales-to-date through the voluntary green power programs. January to August 2009 total voluntary green power sales for all three utilities was 242 million kWh, or 27.6 aMW.
- 1.8 percent of investor-owned utility customers in Washington participated in voluntary green power programs in 2008. This is a 5 percent increase in customer participation since 2007.
- Investor-owned utilities have not participated in aggregate purchasing opportunities<sup>1</sup> for green power.

**Table 1 – 2008 and 2009 Summary of Investor-owned Utilities’ Green Power Programs**

	kWh sales of green power	Revenue from green power programs	Number of green power program participants
2008 <sup>2</sup>	354,989,499	\$ 3,025,043	26,100
2009 Projected <sup>3</sup>	363,047,420	\$ 3,218,615	27,496
Projected % 2009 change from 2008	2%	6%	5%

<sup>1</sup> Such as Bonneville Power Administration’s Environmentally Preferred Power option. See RCW 19.29A.090 (5).

<sup>2</sup> Annual 2008 data is revised from the investor-owned utilities’ estimated figures provided in the 2008 Green Power Report.

<sup>3</sup> Annual 2009 projections for kWh sales and revenues are extrapolated from actual data for January through August. Participants for 2009 are projected by applying the 2007-2008 growth rate to 2008 participants.

## INTRODUCTION

Engrossed House Bill 2247, enacted in 2001,<sup>4</sup> requires certain electric utilities in Washington State to offer their retail customers an option to purchase qualified alternative energy resources - often referred to as “green power.”<sup>5</sup> This law also requires electric utilities to report annually the details of their green power programs until 2012. Consumer-owned utilities are required to submit this report to the Department of Commerce<sup>6</sup>. Investor-owned utilities are required to submit this report to the Utilities and Transportation Commission (UTC). Upon receiving the data each year, the agencies must prepare and submit a report to the Legislature.

For 2009, the UTC is only reporting on the data received from the investor-owned utilities under its jurisdiction – Avista Corporation (Avista), Pacific Power & Light Company (PacifiCorp), and Puget Sound Energy, Inc. (PSE). This report provides an update on the performance of green power programs provided by investor-owned utilities using data for all of 2008 and January through August of 2009. It gives a summary of each investor-owned utility’s program, participation levels, program revenues and green power sales, including the breakdown of electricity by source. To assist the utility reporting process, the UTC surveyed the three investor-owned electric utilities required to respond.

### **Green Power Program Options Offered by Investor-Owned Utilities**

All three investor-owned utilities offer green power programs to all customers. The programs vary in design and price. Each investor-owned utility offers a “block” option to participants in their green power programs. A “block” of power refers to a specific number of kWh combined into a block; the participant pays a flat rate for each block of power. Customers have the option of buying any number of blocks of green power each month. Prices range from Avista’s low of \$0.0033 per kWh to PacifiCorp’s rate of \$0.0194 per kWh.

**Table 2 – Green Power Program Options**

Company	Program	Tariff	Price	Unit	Price/kWh
<b>Avista</b>	Buck a Block	Schedule 95 Optional Renewable Power Rate	\$1.00	300 kWh Block	\$0.0033
<b>PacifiCorp</b>	Blue Sky	Schedule 70 Renewable Energy Rider	\$1.95	100 kWh Block	\$0.0194

<sup>4</sup> L2001, ch. 214. Codified at RCW 19.29A.090

<sup>5</sup> A “qualified alternative energy resource” is electricity produced from generation facilities fueled by wind, solar energy, geothermal energy, landfill gas, wave or tidal action, gas produced during the treatment of wastewater, qualified hydropower or biomass. See RCW 19.29A.090(3).

<sup>6</sup> Formerly the Department of Community, Trade and Economic Development.

<b>PacifiCorp</b>	Blue Sky Bulk Purchase	Schedule 73, Renewable Energy Rider	\$0.70	100 kWh Block Plus \$1500/year	varies
<b>Puget Sound Energy</b>	Green Power Program	Schedule 135 Green Energy Option Purchase Rider	\$2.00	160 kWh Block (2 block minimum)	\$0.0125
<b>Puget Sound Energy</b>	Green Power Program	Schedule 136 Large Volume Green Energy Purchase Rider	\$0.006	kWh (83,334 minimum)	\$0.006

The law gives utilities two options to provide qualified alternative energy resources: green power – the actual electricity produced by green power resources – and green tags. Green tags, often called “renewable energy credits,” (RECs) are a type of currency used in the electricity industry to represent the environmental and social benefits of clean electricity production. They are separated from the electricity produced and sold as a distinct product. A green tag represents the environmental attributes equivalent to a specific amount of electricity produced by renewable resources. All three investor-owned utilities purchase and re-sell green tags for their green power programs.

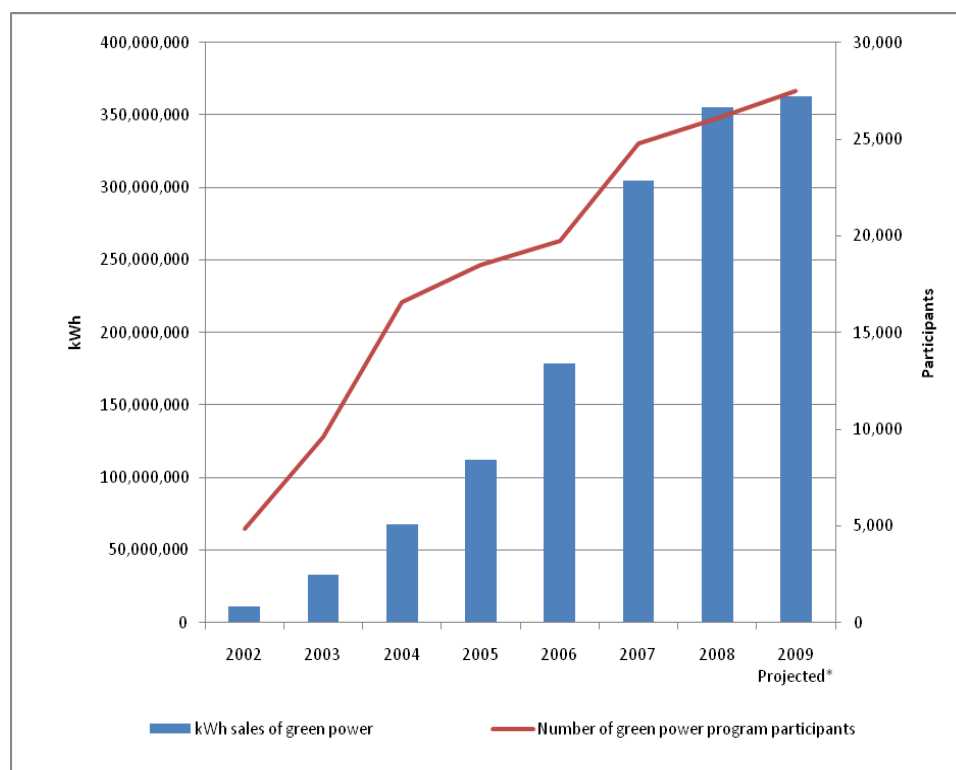
In the annual survey, utilities were asked to share any recent changes in their programs. PSE shared that it signed a contract in October 2008 with a third-party green power marketer, 3Degrees, to help with the education and outreach to residential electric customers. PSE officially launched its outreach initiatives in January of 2009. Since the start of the year, total customer participation has increased 12 percent over 2008. PSE’s goal is to increase customer participation to 4 percent in 3 years and 5 percent in 5 years.

### **Historic Performance of Investor-owned Utilities’ Green Power Programs**

Since 2002, investor-owned utility kWh sales of green power through voluntary programs have increased 30-fold. Customer participation has increased 6-fold. See Table 3. These increases, while impressive, only account for 1.8 percent of customers, 1 percent of total retail kWh sales, and 0.1 percent of retail revenue.

**Table 3 – Summary of Investor-owned Utilities’ Green Power Programs**

	kWh sales of green power	Revenue from green power programs	Number of green power program participants
2002	11,503,750	\$ 232,834	4,880
2003	32,954,415	\$ 638,119	9,617
2004	67,452,046	\$ 1,054,155	16,567
2005	112,007,800	\$ 1,559,005	18,489
2006	178,309,200	\$ 2,141,307	19,729
2007	304,960,400	\$ 2,808,181	24,779
2008 <sup>7</sup>	354,989,499	\$ 3,025,043	26,100
2009 Projected <sup>8</sup>	363,047,420	\$ 3,218,615	27,496
Factor increase since 2002	32	14	6
Projected % 2009 change from 2008	2%	6%	5%



**Figure 1 - Investor-owned Utilities Green Power Sales and Program Participants**

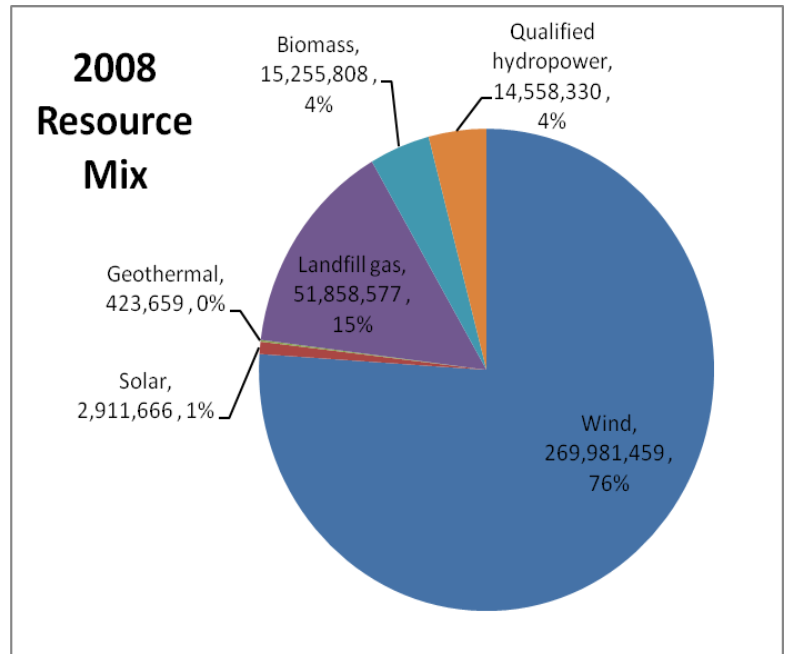
<sup>7</sup> Annual 2008 data is revised from the investor-owned utilities’ estimated figures provided in the 2008 Green Power Report.

<sup>8</sup> Annual 2009 projections for kWh sales and revenues are extrapolated from actual data for January through August. Participants for 2009 are projected by applying the 2007-2008 growth rate to 2008 participants.

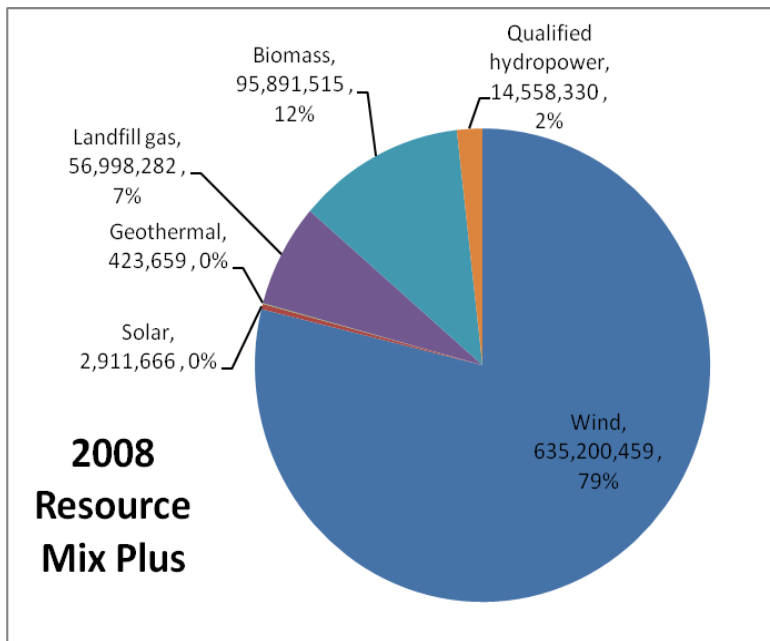
## GREEN POWER PROGRAM RESULTS

In 2008, total investor-owned utility voluntary green power program sales were 355 million kWh, approximately 1 percent of total investor-owned utility retail sales. The majority of these green power sales supported investment in wind-powered electricity, followed by landfill gas, biomass, and qualified hydropower. See Figure 2.

Apart from the voluntary green power programs, in 2008, Washington's investor-owned electric utilities purchased an additional 451 million kWh of green power, included in each company's fuel mix. The total 806 million kWh, or 92 aMW, is 2 percent of total retail sales of the investor-owned utilities. The combined resource mix for the total 806 million kWh is shown in Figure 3.



**Figure 2- Voluntary Program Green Power Sales Fuel Resource Distribution**



**Figure 3 - All Green Power Resources Fuel Mix**

For more on the fuel mix for all state utilities, see the Fuel Mix Disclosure Program and associated reports located on the Department of Commerce website at <http://www.commerce.wa.gov/site/539/default.aspx>.

Fuel mix disclosure reports do not show green power resources if the utility has sold the RECs associated with those resources. In addition, PacifiCorp does not report its fuel mix by resource, so there may be additional green power that is not represented in Figure 3.

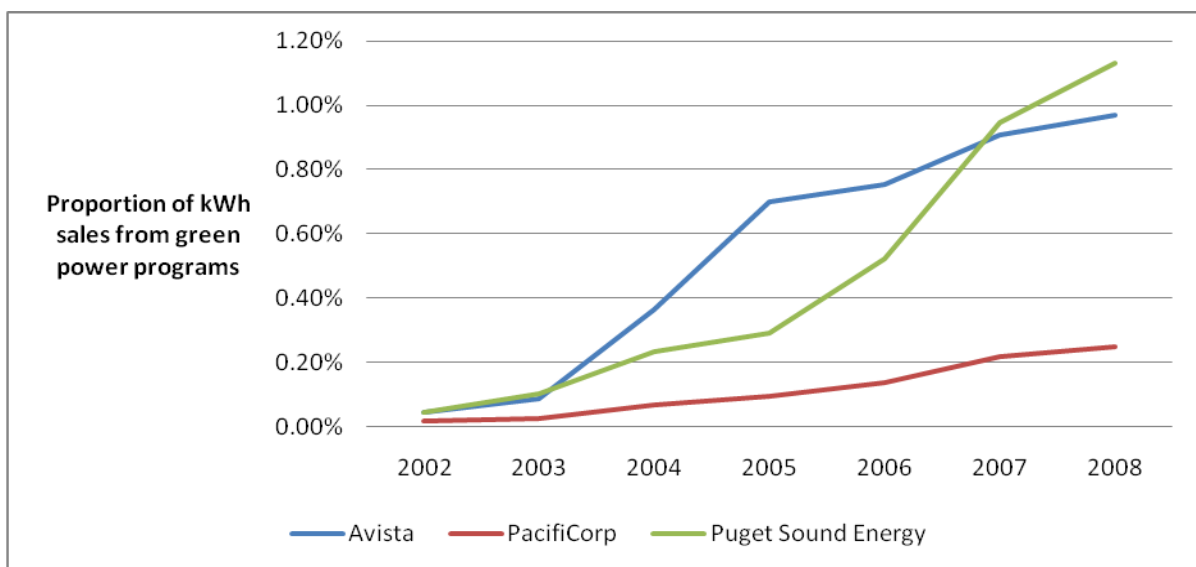


## Green Power Sales

Voluntary green power sales at individual utilities have all increased through the actual recorded 2008 sales, both in absolute numbers, and as a percentage of total sales. However, projections for 2009, based on actual sales through August, present a different picture. Avista sales are projected to decrease by about 1 percent, and PacifiCorp sales are projected to decrease by as much as 6 percent. It is also interesting to note that while Avista and PSE are both near 1 percent of total sales, PacifiCorp is significantly lower at 0.2 percent.

**Table 4: Green Power Program kWh Sales by Utility**

	Avista	PacifiCorp	Puget Sound Energy	All IOUs
2002	2,224,750	783,000	8,496,000	11,503,750
2003	4,564,615	1,076,800	27,313,000	32,954,415
2004	18,646,746	2,695,300	46,110,000	67,452,046
2005	36,617,700	4,049,100	71,341,000	112,007,800
2006	40,855,800	5,711,400	131,742,000	178,309,200
2007	49,667,400	8,887,200	246,405,800	304,960,400
2008	53,627,700	10,195,200	291,166,599	354,989,499
2009 Projection <sup>9</sup>	52,980,300	9,596,100	300,471,020	363,047,420



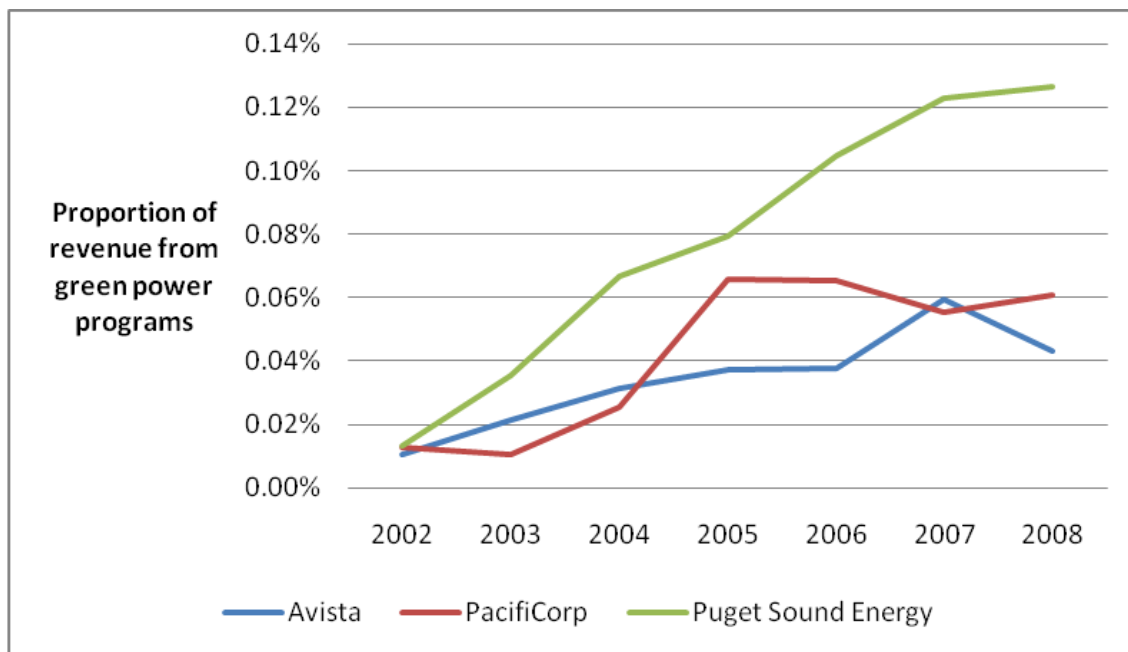
**Figure 4 - Proportion of Green Power Program kWh Sales**

<sup>9</sup> Actual data is available through August 2009. Annual sales for 2009 were estimated based upon sales continuing at current levels.

The corresponding aspect of green power sales is revenue. The revenue shown in Table 5 does not reflect the total cost of the electricity. Rather, it typically reflects the above-market cost of the renewable resource power and includes the costs of program administration and marketing. It is interesting to note that PSE's proportion of revenue, shown in Figure 5, is roughly twice that of Avista and PacifiCorp. It is also interesting to note that Avista's program is the cheapest per kWh, while PacifiCorp's is the most expensive of the three programs. The Commission will encourage the companies to file revisions to rates.

**Table 5 – Revenue from Utility Green Power Programs**

	Avista	PacifiCorp	Puget Sound Energy	All IOUs
2002	40,450	22,474	169,910	232,834
2003	82,993	20,998	534,128	638,119
2004	100,976	47,637	905,542	1,054,155
2005	122,059	155,553	1,281,393	1,559,005
2006	136,186	142,084	1,863,037	2,141,307
2007	222,125	129,738	2,456,318	2,808,181
2008	178,759	150,692	2,695,592	3,025,043
2009 Projection*	176,601	155,495	2,886,519	3,218,615



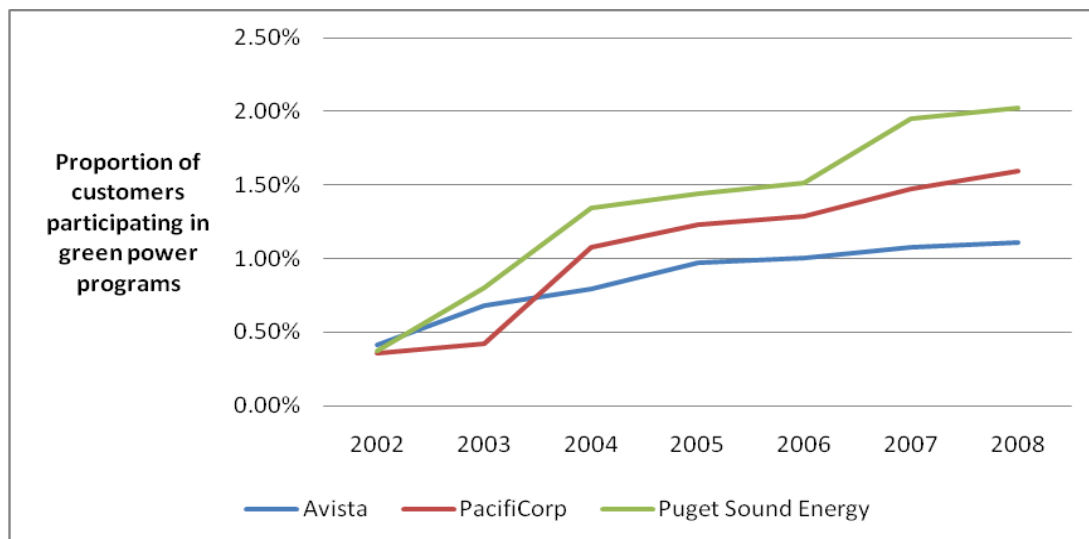
**Figure 5 - Proportion of Revenue from Utility Green Power Programs**

## Customer Participation

All three investor-owned utilities have seen increases in customer participation since 2002. PSE's proportion of participation was the highest at about 2 percent at the end of 2008, and the utility has established new goals to increase participation to 4 percent by 2011, and 5 percent by 2013. It appears the utility is well on its way to meeting those goals. PacifiCorp has reached 1.5 percent, and Avista is at 1 percent for customer participation. The projection shown for 2009 in Table 6 is a simple application of the 2007-2008 growth rate. If customer participation drops off as much as sales have done, it is unlikely that the 2009 projection will be realized.

**Table 6 – Customer Participation in Green Power Programs**

	Avista	PacifiCorp	Puget Sound Energy	All IOUs
2002	870	424	3,586	4,880
2003	1,460	502	7,655	9,617
2004	1,715	1,311	13,541	16,567
2005	2,274	1,515	14,700	18,489
2006	2,434	1,582	15,713	19,729
2007	2,486	1,836	20,457	24,779
2008	2,572	2,019	21,509	26,100
2009 Projection <sup>10</sup>	2,661	2,220	22,615	27,496



**Figure 6 - Proportion of Customers Participating in Green Power Programs**

For more details on the original individual utility programs, see the 2002 Green Power Report Appendix at [http://www.commerce.wa.gov/CTED/documents/ID\\_1407\\_Publications.pdf](http://www.commerce.wa.gov/CTED/documents/ID_1407_Publications.pdf).

<sup>10</sup> Participants for 2009 are projected by applying the 2007-2008 growth rate to 2008 participants.